



Africa RISING experiences

A. Larbi, M. Bekunda, I. Hoeschle-Zeledon, K. Bekele and G. Fischer

International Institute of Tropical Agriculture

P. Thorne and K. Mekonnen

International Livestock Research Institute

C. Azzarri

International Food Policy Research Institute

J. Groot

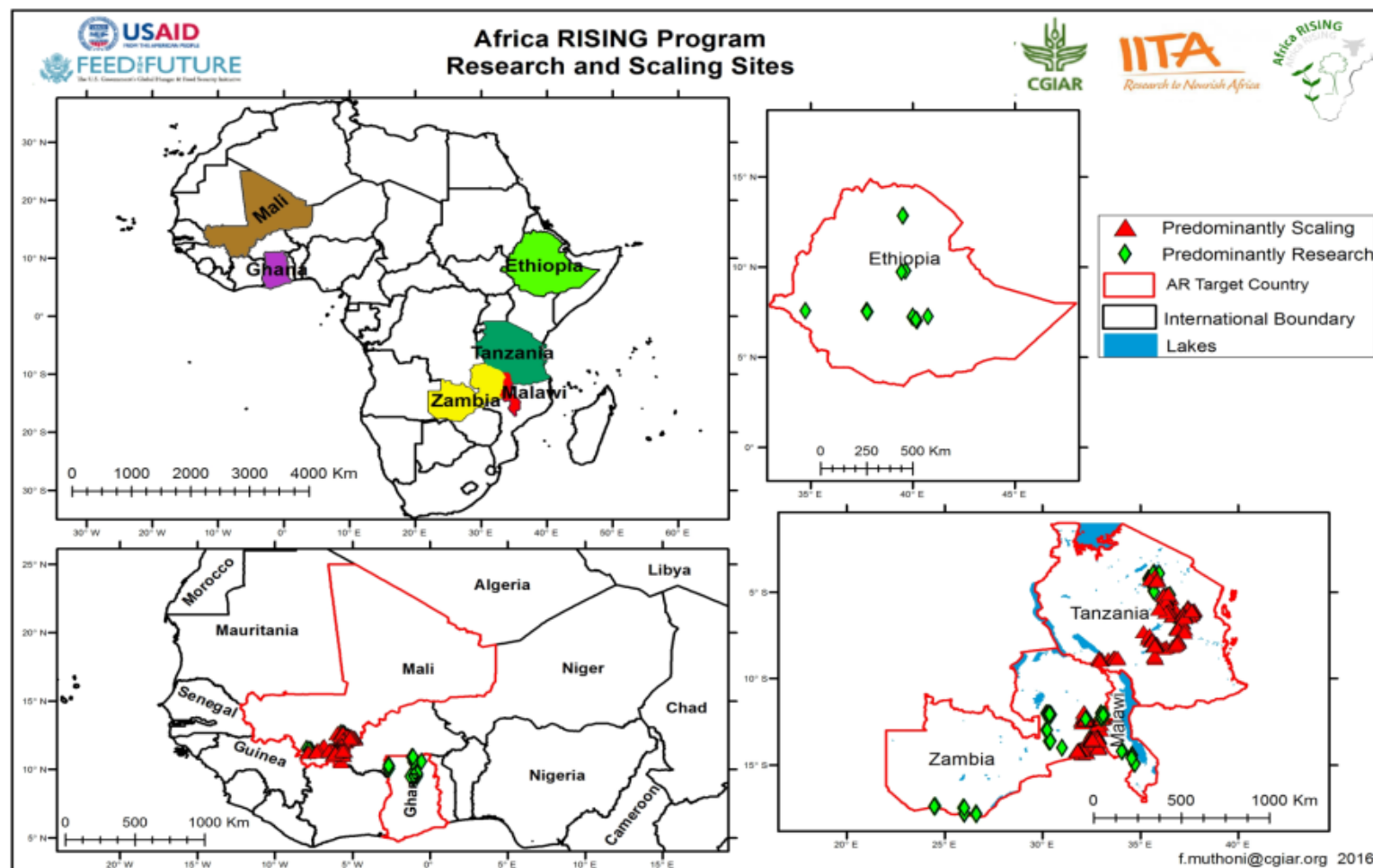
Wageningen University

Systems Research Marketplace

15-17 November, 2016; Ibadan, Nigeria



Africa RISING sites

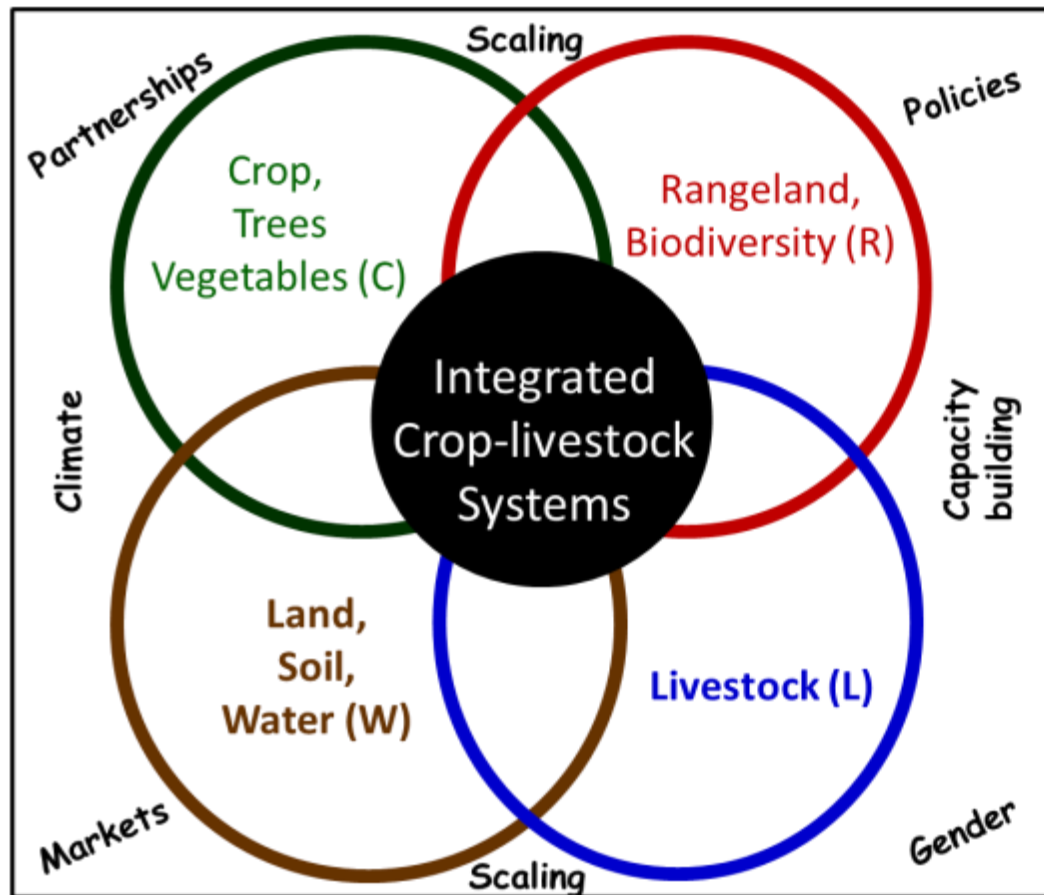




Africa RISING objectives

- Identify and evaluate demand-driven options for sustainable intensification (SI) that contribute to improved:
 - ***Production/productivity*** – crop, livestock, crop-livestock
 - ***Nutrition*** – women and children
 - ***Management of natural resources*** – soil, land, water
 - ***Household incomes***
- Facilitate ***partner-led dissemination*** of integrated innovations for sustainable intensification within ***beyond the Africa RISING intervention communities***

Systems research perspective



1. C
2. W
3. L
4. R
5. $C \times W$
6. $C \times L$
7. $C \times R$
8. $W \times L$
9. $W \times R$
10. $L \times R$
11. $C \times W \times L$
12. $C \times W \times R$
13. $C \times L \times R$
14. $C \times W \times L \times R$

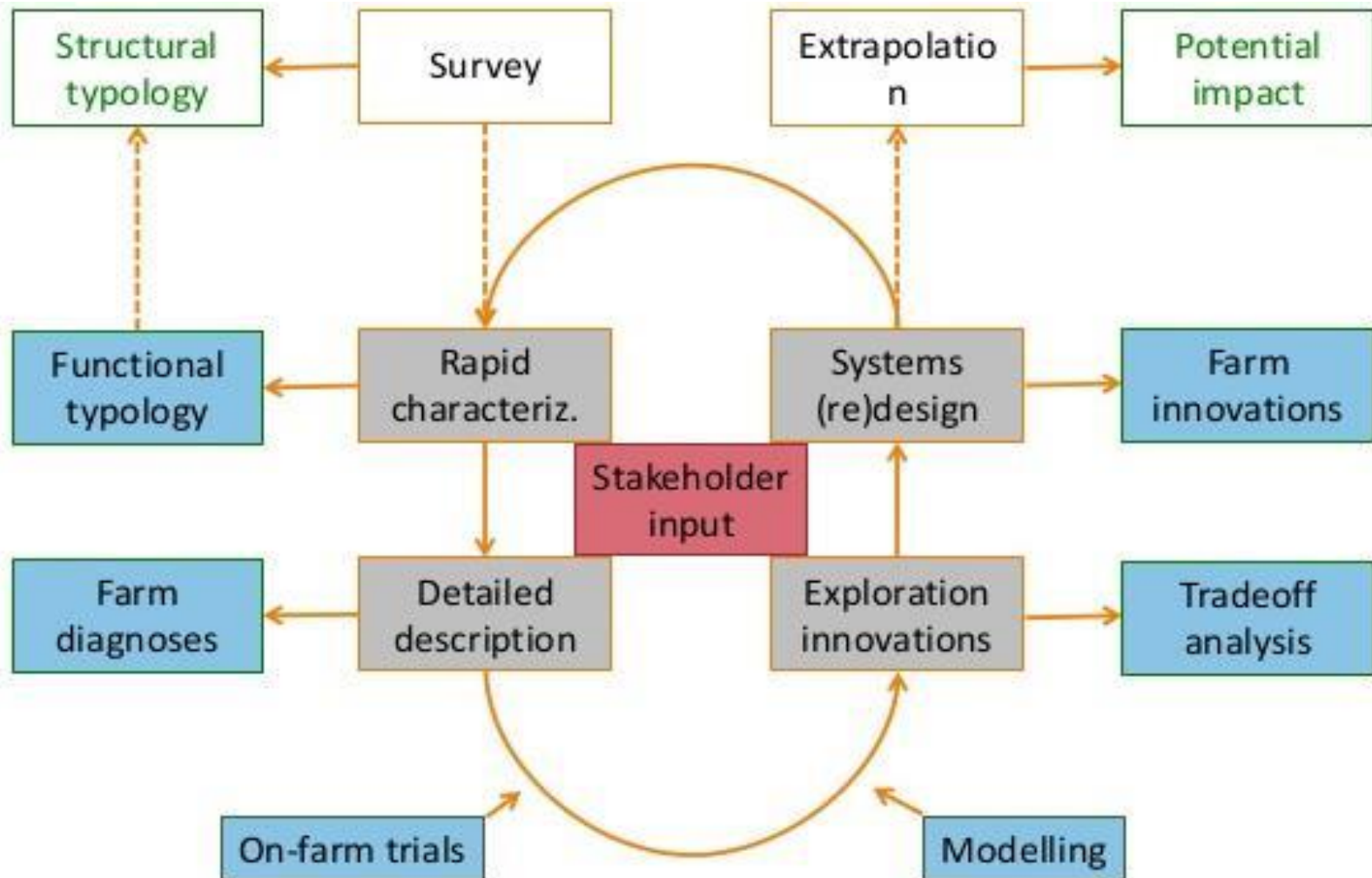
Integrated crop-livestock systems



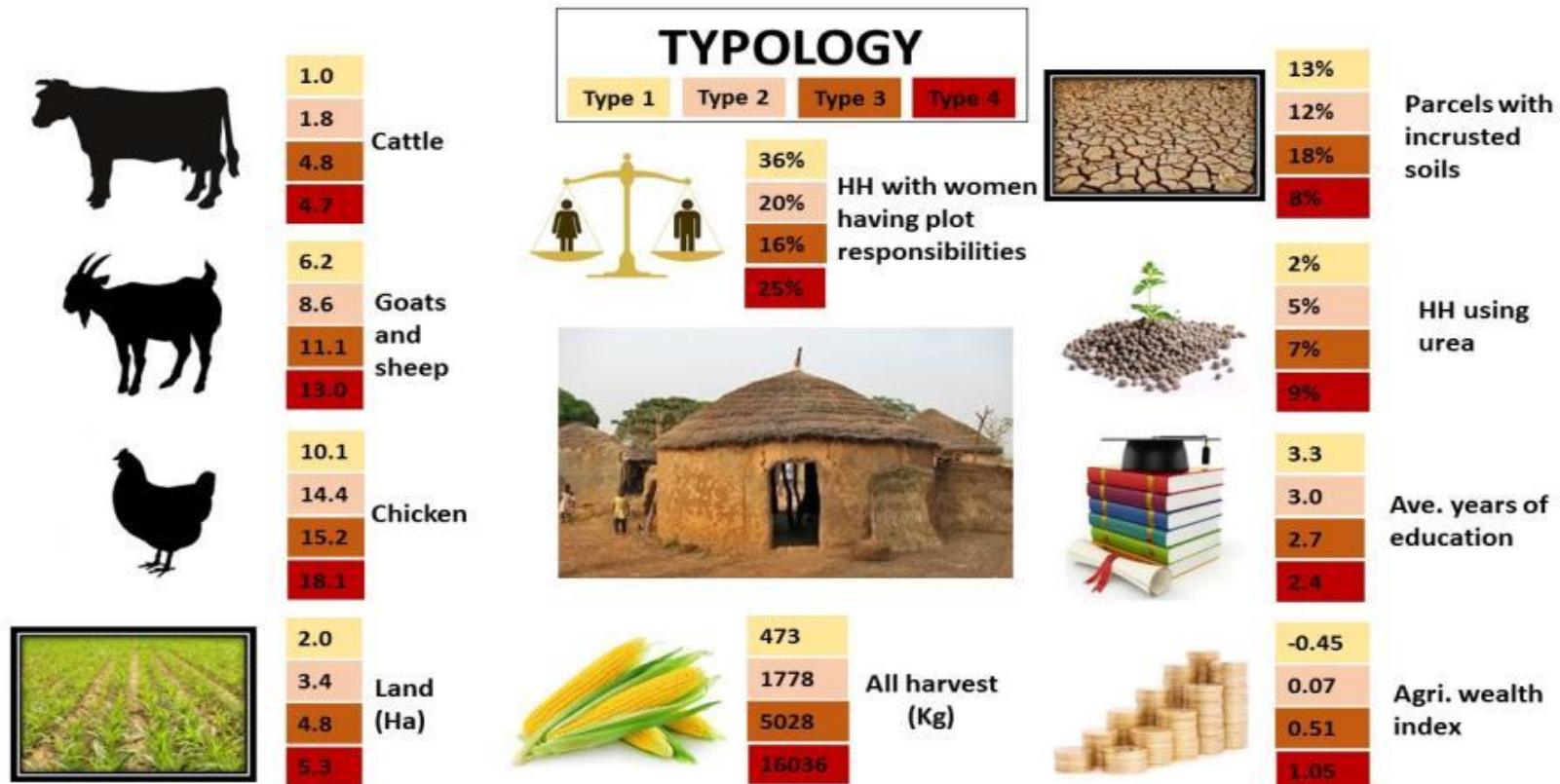
Systems research perspective



Core principles



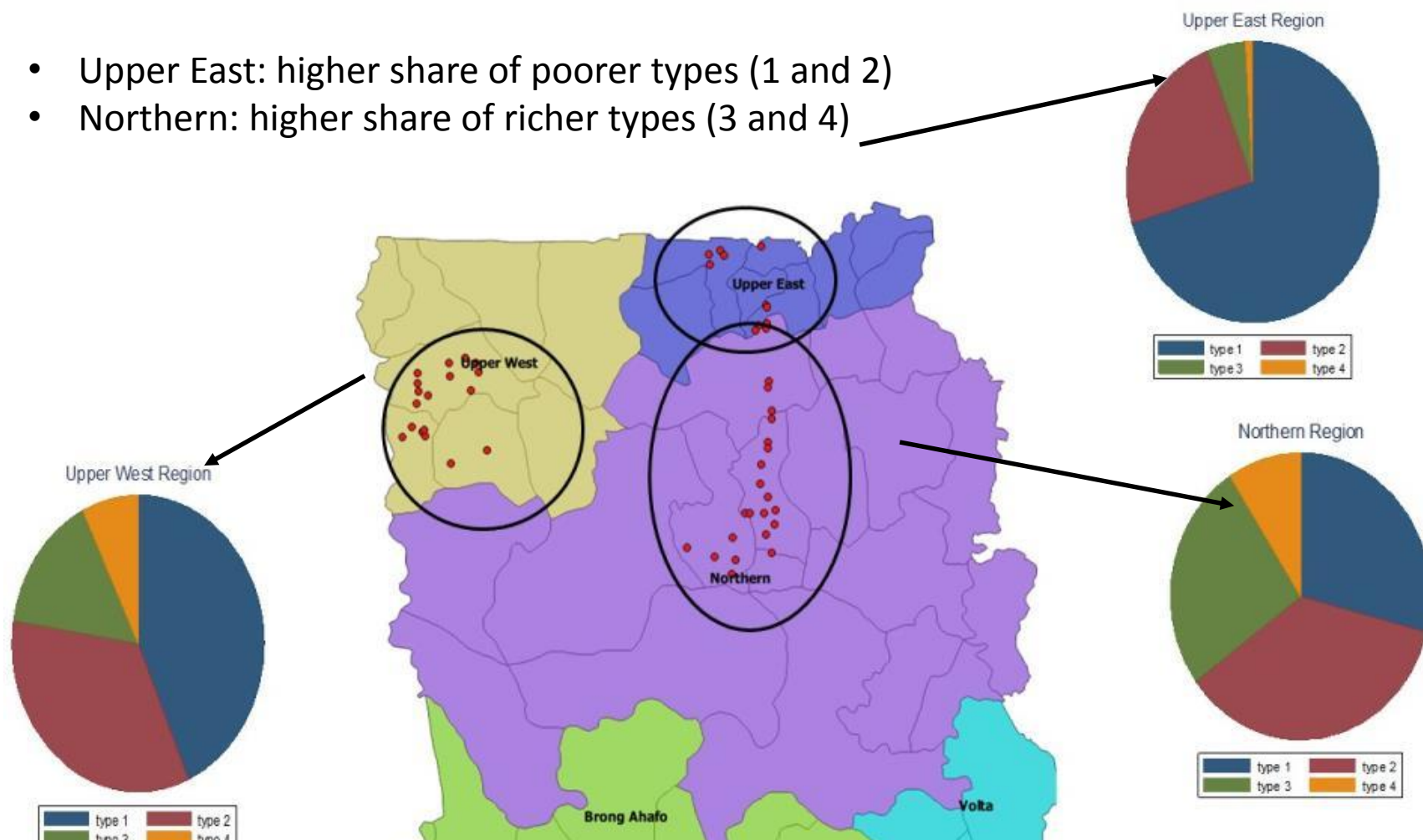
Defining farm type - Ghana



- **Type 1:** Female-headed households with low to medium endowments
- **Type 2:** Young, medium-endowed households
- **Type 3:** Medium to highly endowed households with cattle
- **Type 4:** High yield households with high endowments

Defining farm type - Ghana

- Upper East: higher share of poorer types (1 and 2)
- Northern: higher share of richer types (3 and 4)





Experiences - Ghana

Integrated crop-livestock research, a whole-farm approach



Community analyses to identify constraints, opportunities and research activities followed by joint implementation of trials.

Experiences - Ethiopia



Vegetable production



Multipurpose 2 wheel drive tractor



Water harvesting



Improved Avocado farming



Cultivated forages/oat-vetch mixtures



A dairy cow fed with improved and local feed sources

Systems research in Ethiopian highlands- Action research with smallholder farmers to validate Africa RISING integrated innovations. Farmers have started securing food, and diversifying nutrition and income.



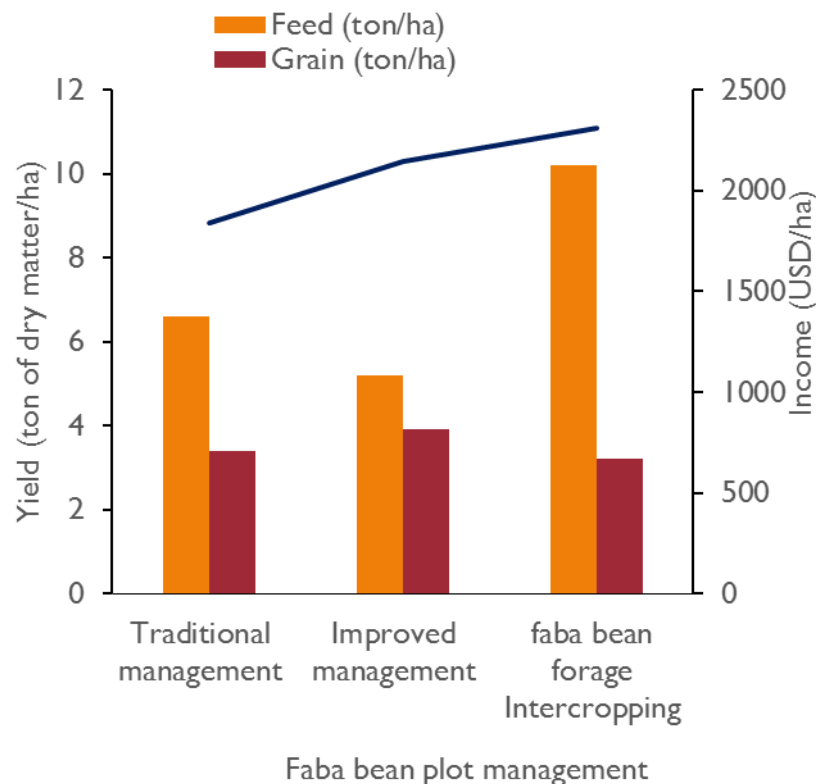
Experiences - Ethiopia

Systems research in Ethiopia highlands: Sustainable intensification for small-scale faba bean/forage production systems

Testing intercropping for:

- Least diminished grain yield but with improved feed biomass production.

- Income benefits.



Grain and feed biomass yields, and economic gains associated with different management approaches



Experiences - Malawi

Intensification of maize-groundnut-pigeon pea-livestock

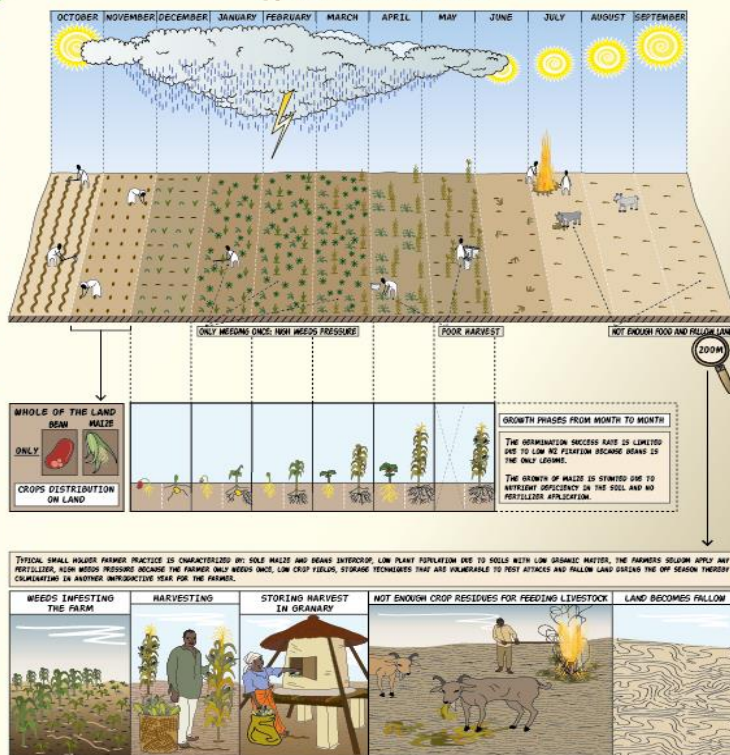
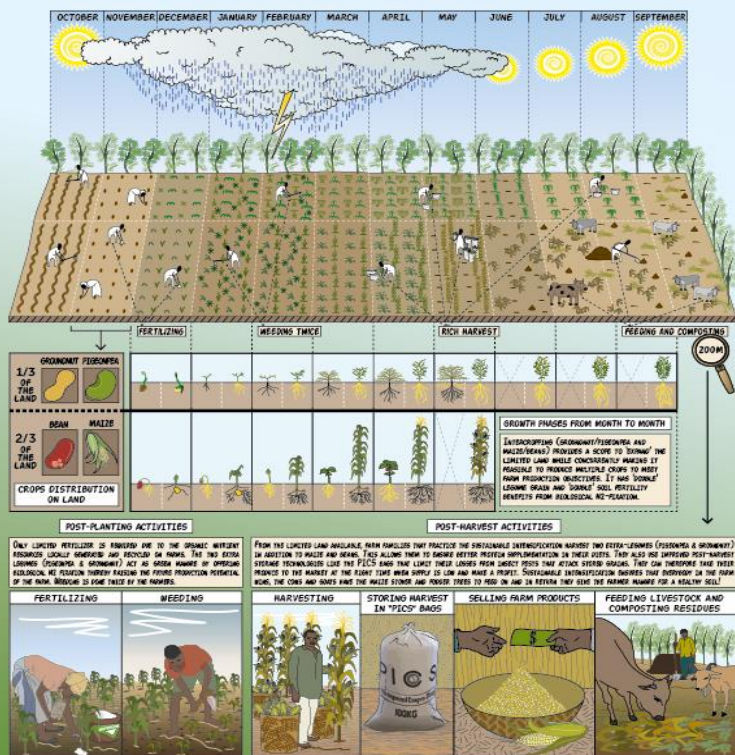


HOW DOES A FARM FAMILY IN MALAWI PRODUCE MORE FROM THEIR FARM?

Sustainable Intensification

VS

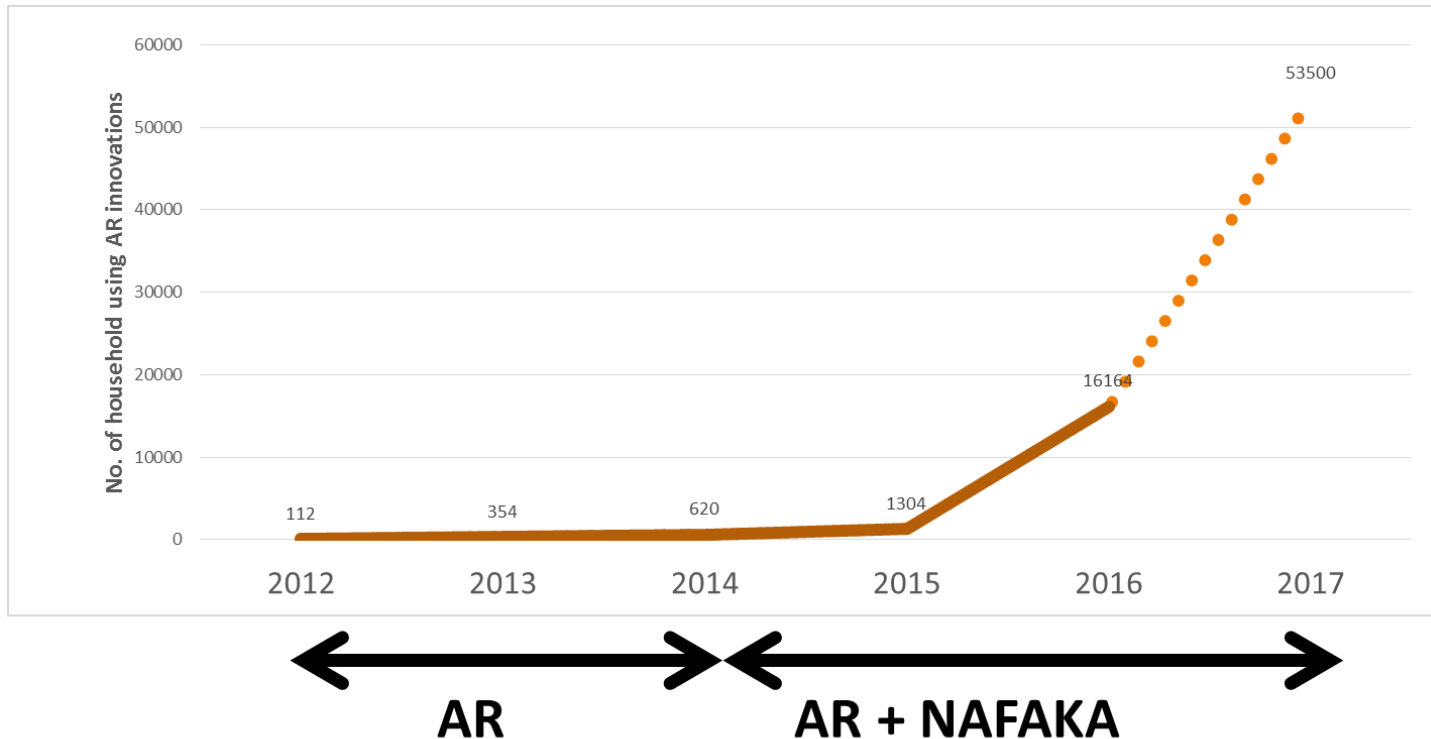
Typical Farmer Practice





Experiences - Tanzania

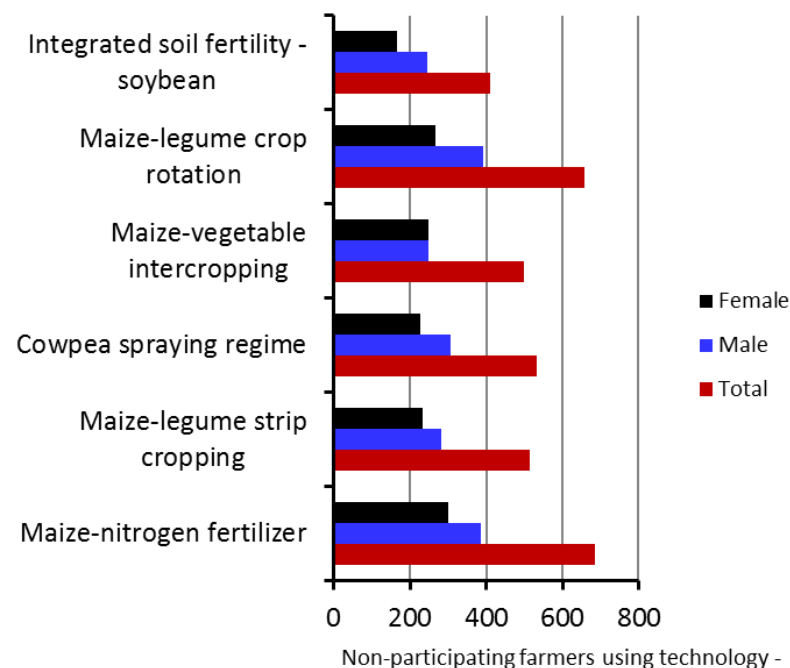
Impact of research (AR) partnering with development (NAFAKA) on number of households using Africa RISING technologies





Experiences - Ghana

Scaling-out and monitoring adoption of technologies



The Ministry of Food and Agriculture and International Institute of Tropical Agriculture organize Farmers' Field Days to demonstrate improved cropping systems facilitating adoption by non-beneficiary farmers who are not directly involved in the project.



Lessons

- Limited **whole-systems thinking** and **gender-sensitive** research.
- Lack of **cross-disciplinary linkages** and **cross-sectional approaches** in crop and livestock research
- **Participatory approaches** and **multi-stakeholder partnerships** - key to success and impact.
- **Innovation platforms** are **essential** to enhance communications .
- More evidence needed on which **scaling approaches** and **whole systems research** are the most effective to achieve impact.
- **Stepwise approach to integration** of sustainable intensification interventions is a reality in most cases.



Thank You

Africa Research in Sustainable Intensification for the Next Generation

africa-rising.net



This presentation is licensed for use under the Creative Commons Attribution 4.0 International Licence.